

Missouri Department of Natural Resources



PUBLIC NOTICE

APPLICATION FOR MISSOURI STATE OPERATING PERMIT

DATE: December 3, 2004

In accordance with the state Clean Water Law, Chapter 644, RSMo, Clean Water Commission regulation 10 CSR 20-6.010, and the federal Clean Water Act, the applicants listed herein have applied for authorization to either discharge to waters of the state or to operate a no-discharge wastewater treatment facility. The proposed permits for these operations are consistent with applicable water quality standards, effluent standards and/or treatment requirements or suitable timetables to meet these requirements (see 10 CSR 20-7.015 and 7.031). All permits will be issued for a period of five years, unless noted otherwise in the Public Notice for that discharge.

On the basis of preliminary staff review and the application of applicable standards and regulations, the Missouri Department of Natural Resources, as administrative agent for the Missouri Clean Water Commission, proposes to issue a permit(s) subject to certain effluent limitations, schedules, and special conditions. The proposed determinations are tentative pending public comment.

Persons wishing to comment on the proposed effluent limitations and/or determinations are invited to submit them in writing to the Department of Natural Resources, Southwest Regional Office, Water Pollution Unit, 2040 W. Woodland, Springfield, Missouri 65807, ATTN: Cynthia S. Davies, Water Section Chief. Please include the permit number in all comment letters.

Comments should be confined to the issues relating to the proposed action and permit(s) and the effect on water quality. The department may not consider as relevant comments or objections to a permit based on issues outside the authority of the Clean Water Commission, (see Curdt v. Mo. Clean Water Commission, 586 S.W.2d 58 Mo. App. 1979).

All comments must be postmarked by January 2, 2005 or received in our office by 5:00 p.m. on January 5, 2005. The requirement of a signed document makes it impossible to accept email comments for consideration at this time. Comments will be considered in the formulation of all final determinations regarding the applications. If response to this notice indicates significant public interest, a public meeting or hearing may be held after due notice for the purpose of receiving public comment on the proposed permit or determination. Public hearings and/or issuance of the permit will be conducted or processed according to 10 CSR 20-6.020.

Copies of all draft permits, comments, and other information including copies of applicable regulations are available for inspection and copying at the department's website, www.dnr.mo.gov/wpscd/wpcp/homewpcp.htm, or at the Department of Natural Resources, Southwest Regional Office, Water Pollution Unit, 2040 W. Woodland, Springfield, Missouri 65807, between the hours of 8:00 a.m. and 5:00 p.m., Monday through Friday.

Public Notice Date: December 3, 2004

Permit Number: MO-0131016

Southwest Regional Office

FACILITY NAME AND ADDRESS	NAME AND ADDRESS OF OWNER
Roaring River Subdivision Wastewater Treatment Facility Off Highway 86 Eagle Rock, MO 65641	Mr. Aaron Dalton P.O. Box 17 Eagle Rock, MO 65641
RECEIVING STREAM & LEGAL DESCRIPTION	TYPE OF DISCHARGE
Unnamed Tributary to Table Rock Lake NE ¼, NE ¼, SW ¼, Sec. 10, T21N, R26W Barry County	Domestic, new

Plans and specifications for this facility have not been reviewed by the Department of Natural Resources. The design engineer, a registered Missouri professional engineer, has certified that the plans and specifications meet all requirements of 10 CSR 20-Chapter 8 Waste Treatment Design.

STATE OF MISSOURI
DEPARTMENT OF NATURAL RESOURCES
MISSOURI CLEAN WATER COMMISSION



MISSOURI STATE OPERATING PERMIT

In compliance with the Missouri Clean Water Law, (Chapter 644 R.S. Mo. as amended, hereinafter, the Law), and the Federal Water Pollution Control Act (Public Law 92-500, 92nd Congress) as amended.

Permit No. MO-0131016

Owner: Mr. Aaron Dalton
Address: P.O. Box 17, Eagle Rock, MO 65641

Continuing Authority: Ozarks Clean Water Company
Address: P.O. Box 973, Kimberling City, MO 65686

Facility Name: Roaring River Subdivision WWTF
Facility Address: Off Highway 86, Eagle Rock, MO 65641

Legal Description: NE ¼, NE ¼, SW ¼, Sec. 10, T21N, R26W, Barry County
Receiving Stream: Unnamed Tributary to Table Rock Lake (U)
First Classified Stream and ID: Table Rock Lake (L2) (07313) 303(d)
USGS Basin & Sub-watershed No.: (11010001-080003)

is authorized to discharge from the facility described herein, in accordance with the effluent limitations and monitoring requirements as set forth herein:

FACILITY DESCRIPTION

Outfall #001 – Subdivision / Sewerage Works - SIC #4952 / 4952

No-discharge System

Septic tanks / recirculating textile filter / tertiary dosing tank / wastewater irrigation / sludge disposal by contract hauler.

Design population equivalent is 33.
Design flow is 2,498 gallons per day.
Design sludge production is 0.17 dry tons/year.

This permit authorizes only wastewater discharges under the Missouri Clean Water Law and the National Pollutant Discharge Elimination System; it does not apply to other regulated areas. This permit may be appealed in accordance with Section 644.051.6 of the Law.

Effective Date

Stephen M. Mahfood, Director, Department of Natural Resources
Executive Secretary, Clean Water Commission

Expiration Date

R. Bruce Martin, Director, Southwest Regional Office

FACILITY DESCRIPTION (continued)

Outfall #001 – Irrigation System Design

Receiving Stream Watershed: a gaining stream setting

Facility Type: No-discharge Primary Treatment, Storage, & Subsurface Irrigation System for year-round flows.

Outfall #001 – Land Application System Design:

Irrigation volume per year:	911,770 gallons
Irrigation areas:	31,225 square feet (0.717 acres)
Reserve Irrigation areas:	31,225 square feet (0.717 acres)
Application rates per acre:	0.08 gallons per day per square foot; 46.8 inches / year
Field Slopes:	less than 6.0 percent
Equipment type:	Subsurface Irrigation
Vegetation:	Bermuda Grass (warm season): Tall Fescue Grass (cool season)
Application rate is based on:	Nutrient removal capability of the vegetation. (Vegetation is to be removed as hay.)

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (continued)				PAGE NUMBER 4 of 8		
				PERMIT NUMBER MO-0131016		
The permittee is authorized to discharge from outfall(s) with serial number(s) as specified in the application for this permit. The final effluent limitations shall become effective upon issuance and remain in effect until expiration of the permit. Such discharges shall be controlled, limited and monitored by the permittee as specified below:						
OUTFALL NUMBER AND EFFLUENT PARAMETER(S)	UNITS	FINAL EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
<u>Groundwater Compliance</u>						
Down-gradient Monitoring wells Average BOD ₅ minus Up-gradient Monitoring wells Average BOD ₅	mg/L		30	20	once/month	calculated
Down-gradient Monitoring wells Average Total Phosphorus as P minus Up-gradient Monitoring wells Average Total Phosphorus as P	mg/L			0.5	once/month	calculated
Down-gradient Monitoring wells Average Ammonia Nitrogen as N minus Up-gradient Monitoring wells Average Ammonia Nitrogen as N	mg/L	3.28		1.64	once/month	calculated
Down-gradient Monitoring well Average Nitrate plus Nitrite as N minus Up-gradient Monitoring well Average Nitrate plus Nitrite as N	mg/L	16.42		8.19	once/month	calculated
MONITORING REPORTS SHALL BE SUBMITTED <u>MONTHLY</u> ; THE FIRST REPORT IS DUE _____. THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.						
B. STANDARD CONDITIONS						
IN ADDITION TO SPECIFIED CONDITIONS STATED HEREIN, THIS PERMIT IS SUBJECT TO THE ATTACHED <u>Parts I & III</u> STANDARD CONDITIONS DATED <u>October 1, 1980 and August 15, 1994</u> , AND HEREBY INCORPORATED AS THOUGH FULLY SET FORTH HEREIN.						

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (continued)

* See Special Condition #7.

** Monitoring requirement only.

C. SPECIAL CONDITIONS

1. This permit may be reopened and modified, or alternatively revoked and reissued, to:

- (a) Comply with any applicable effluent standard or limitation issued or approved under Sections 301(b)(2)(C) and (D), 304(b)(2), and 307(a) (2) of the Clean Water Act, if the effluent standard or limitation so issued or approved:
 - (1) contains different conditions or is otherwise more stringent than any effluent limitation in the permit; or
 - (2) controls any pollutant not limited in the permit.
- (b) Incorporate new or modified effluent limitations or other conditions, if the result of a waste load allocation study, toxicity test or other information indicates changes are necessary to assure compliance with Missouri's Water Quality Standards.
- (c) Incorporate new or modified effluent limitations or other conditions if, as the result of a watershed analysis, a Total Maximum Daily Load (TMDL) limitation is developed for the receiving waters which are currently included in Missouri's list of waters of the state not fully achieving the state's water quality standards, also called the 303(d) list.

The permit as modified or reissued under this paragraph shall also contain any other requirements of the Clean Water Act then applicable.

2. All outfalls must be clearly marked in the field.
3. Permittee will cease discharge by connection to areawide wastewater treatment system within 90 days of notice of its availability.
4. Changes in Discharges of Toxic Substances

The permittee shall notify the Director as soon as it knows or has reason to believe:

- (a) That any activity has occurred or will occur which would result in the discharge of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels:"
 - (1) One hundred micrograms per liter (100 µg/L);
 - (2) Two hundred micrograms per liter (200 µg/L) for acrolein and acrylonitrile; five hundred micrograms per liter (500 µg/L) for 2,5 dinitrophenol and for 2-methyl-4, 6-dinitrophenol; and one milligram per liter (1 mg/L) for antimony;
 - (3) Five (5) times the maximum concentration value reported for the pollutant in the permit application;
 - (4) The level established in Part A of the permit by the Director.
- (b) That they have begun or expect to begin to use or manufacture as an intermediate or final product or byproduct any toxic pollutant, which was not reported in the permit application.

5. Water Quality Standards

- (a) Discharges to waters of the state shall not cause a violation of water quality standards rule under 10 CSR 20-7.031, including both specific and general criteria.
- (b) General Criteria. The following general water quality criteria shall be applicable to all waters of the state at all times including mixing zones. No water contaminant, by itself or in combination with other substances, shall prevent the waters of the state from meeting the following conditions:

C. SPECIAL CONDITIONS (continued)

- (1) Waters shall be free from substances in sufficient amounts to cause the formation of putrescent, unsightly or harmful bottom deposits or prevent full maintenance of beneficial uses;
- (2) Waters shall be free from oil, scum and floating debris in sufficient amounts to be unsightly or prevent full maintenance of beneficial uses;
- (3) Waters shall be free from substances in sufficient amounts to cause unsightly color or turbidity, offensive odor or prevent full maintenance of beneficial uses;
- (4) Waters shall be free from substances or conditions in sufficient amounts to result in toxicity to human, animal or aquatic life;
- (5) There shall be no significant human health hazard from incidental contact with the water;
- (6) There shall be no acute toxicity to livestock or wildlife watering;
- (7) Waters shall be free from physical, chemical or hydrologic changes that would impair the natural biological community;
- (8) Waters shall be free from used tires, car bodies, appliances, demolition debris, used vehicles or equipment and solid waste as defined in Missouri's Solid Waste Law, section 260.200, RSMo, except as the use of such materials is specifically permitted pursuant to section 260.200-260.247.

6. Sludge and Biosolids Use For Domestic Wastewater Treatment Facilities

- (a) Permittee shall comply with the pollutant limitations, monitoring, reporting, and other requirements in accordance with the attached permit Standard Conditions.
- (b) If sludge is not removed by a contract hauler, permittee is authorized to land apply biosolids. Permit Standard Conditions, Part III shall apply to the land application of biosolids. Permittee shall notify the department at least 180 days prior to the planned removal of biosolids. The department may require submittal of a biosolids management plan for department review and approval as determined appropriate on a case-by-case basis.

7. Compliance for groundwater is based four (4) compliance parameters: Five-day Biochemical Oxygen Demand (BOD₅) (mg/L), Total Phosphorus as P (mg/L), Ammonia Nitrogen as N (mg/L), and Nitrate plus Nitrite as N (mg/L).

For groundwater, the system shall be deemed in compliance if the arithmetic averages of each of the four (4) compliance parameters in samples taken from the down-gradient monitoring wells minus the arithmetic averages of the same parameters in samples taken from the up-gradient monitoring wells do not exceed the values listed for the same parameters in Table A above.

D. SCHEDULE OF COMPLIANCE

Please note that the engineering design includes technology not addressed in Missouri Clean Water Commission Regulations 10 CSR 20-Chapter 8 design standards. To assess the effectiveness of the new technology at this facility, the following schedule of compliance must be followed.

1. The permittee acting under the supervision of a professional engineer registered in Missouri shall at a minimum, collect and test samples of wastewater treatment facility effluent as outlined in this permit, measure flow as outlined in this permit, and shall record all maintenance and operational problems experienced with the wastewater treatment facility during the first 34 months of operation. Other sample collection and testing including influent samples, and samples before and after each unit operation or group of unit operations, and other record keeping shall be done at the discretion of the professional engineer as needed to assess the new technology.
2. Within one (1) year of the date of issuance of this permit, the permittee shall submit a preliminary engineering report prepared by the professional engineer to the Southwest Regional Office evaluating the new technology for the first ten (10) months of operation. At the minimum, this evaluation shall include:

D. SCHEDULE OF COMPLIANCE (continued)

- (a) Calculation of the mean (average) test results for all wastewater treatment facility effluent sample results collected under this permit for all parameters that have a maximum average monthly permit limit except pH.
- (b) Calculation of the standard deviation of all test results noted above based on the following:

$$\text{Standard deviation} = \left[\frac{(R_1 - \text{mean})^2 + (R_2 - \text{mean})^2 + (R_3 - \text{mean})^2 + \dots + (R_n - \text{mean})^2}{n - 1} \right]^{1/2}$$

where R_1, R_2, R_3 , etc. are the individual sample results
n is the total number of samples

- (c) Calculation of the Coefficient of Variation (cv) for all test results noted above based on the following:

$$cv = \frac{\text{Standard Deviation}}{\text{Mean}}$$

- (d) Calculation of the Standard Deviation of Logarithms (σ) for all test results noted above based on the following:

$$\sigma = \left[\frac{\ln \left(\frac{cv^2 + 1}{4} \right)}{4} \right]^{1/2}$$

where ln is the natural logarithm to base e
e is 2.718281828

- (e) Calculation of the Performance Standard (P) for 95th percentile probability for all test results noted above based on the following:

$$P = (\text{mean})e^{(z\sigma - 0.5\sigma^2)}$$

where z is 1.645 for 95 percentile probability

- (f) The new technology will be deemed successful if the performance standard for 95th percentile probability is less than or equal to the permit maximum monthly average limit for each parameter.
 - (g) The preliminary engineering report shall also assess any operational or maintenance problems experienced during the initial ten (10) months of operation and shall describe all measures taken to overcome these problems. The engineer shall provide an assessment of whether operation or maintenance problems are sufficiently serious to require replacement of the new technology.
3. Within three (3) years of the date of issuance of this permit, the permittee shall submit a final engineering report prepared by the professional engineer to the Southwest Regional Office evaluating the new technology for the first 34 months of operation including all of the items described in the initial ten (10) month evaluation. Again, the new technology will be deemed successful if the performance standard for 95th percentile probability is less than or equal to the permit maximum monthly average limit for each parameter.

D. SCHEDULE OF COMPLIANCE (continued)

4. If the new technology fails to meet the 95th percentile probability performance standard for any parameter, or if the engineer assesses the operation and maintenance problems to be sufficiently serious to require replacement of the new technology, the permittee shall submit engineering report, plans, specifications prepared by a professional engineer registered in Missouri along with construction permit application forms, filing fee to Southwest Regional Office within one hundred twenty (120) calendar days of the date of submittal of the preliminary or final engineering report evaluation that identified the failure.

These documents shall outline replacement of the failed new technology with standard technology listed in Missouri Clean Water Commission Regulation 10 CSR 20-Chapter 8.

5. Within one hundred eighty (180) calendar days of receiving the construction permit, the permittee shall construct the replacement facilities and submit the Statement of Work Complete prepared by the professional engineer to Southwest Regional Office.

DRAFT

